

III. REMARKS

In the Final Office Action mailed on February 07, 2007, the Examiner: (1) objected to claim 37 because "claim 37 depends from itself"; (2) rejected claims 1, 2, 19, 23, 25, 26, and 27 under 35 U.S.C. § 112 for lack of antecedent basis; (3) rejected claims 1, 8, 10, 12, 18, 19, 20, 22, 23, 24, 26, and 32 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,888,789 to Sakoda et al. (hereinafter "Sakoda") in view of U.S. Patent No. 6,452,981 to Raleigh et al. (hereinafter "Raleigh"); and (4) objected to claims 3-7, 11, 13-17, 21, 25, 28-31, and 33-41 as being dependent upon a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for indicating the allowable subject matter. Applicant has amended the claims based on the Examiner's indication of allowable subject matter as set forth below. Accordingly, Applicant submits that the amended claims are in condition for allowance and notice to that effect is hereby requested.

A. Applicant's Response to Examiner's Objection to Claim 37

The Examiner rejected claim 37 because "claim 37 depends from itself." (Office Action page 3) Applicant has amended claim 37 to depend from 34. Claim 37 originally depended from claim 34, but a typographical error occurred while transcribing the claims for the previous office action response resulting in the error of claim 37 depending from itself.

B. Applicant's Response to Examiner's Rejections under 35 U.S.C. § 112

The Examiner rejected claims 1, 2, 19, 23, 25, 26, and 27 under 35 U.S.C. § 112 for lack of antecedent basis. (Office Action pages 3-4) Applicant has: (1) amended claims 1, 19, 23, 26, and 27 to correct the lack of antecedent basis cited by the Examiner; and (2) cancelled claims 2 and 25, thus rendering the 35 U.S.C. § 112 rejection of claims 2 and 25 moot.

C. Applicant's Response to Examiner's Rejections under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 8, 10, 12, 18, 19, 20, 22, 23, 24, 26, and 32 under 35 U.S.C. § 103(a) as being unpatentable over Sakoda in view of Raleigh, but indicated that claims 3-7, 11, 13-17, 21, 25, 28-31, and 33-41 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. (Office Action pages 4-11) Applicant

has amended the independent claims to incorporate the limitations of the dependent claims that the Examiner indicated would be allowable as set forth below.

1. Claims 1-18

Of these claims, claim 1 is independent. The Examiner indicated that previously presented claim 3 would be allowable "if rewritten in independent form including all of the limitations of the base claim and any intervening claims" because "prior art references...fail to teach...'determining an average number of bit errors in an erroneous tuple based on said probability and selecting is also based on the average number of bit errors in the erroneous tuple' as in claim 3." (Office Action page 9) Previously presented claim 3 depended from previously presented claim 2, and previously presented claim 2 depended from previously presented claim 1. Applicant has: (1) cancelled previously presented claims 2 and 3; and (2) amended independent claim 1 to incorporate the limitations of previously presented dependent claims 2 and 3. Therefore, Applicant submits that currently amended claim 1 is patentable over the combination of Sakoda and Raleigh for at least the reason that the Sakoda-Raleigh combination fails to teach each and every element recited in the amended claim as acknowledged by the Examiner. Claims 4-18 depend from claim 1. Accordingly, Applicant further submits that claims 4-18 are allowable over the Sakoda-Raleigh combination for at least the reason that they depend from a base claim that is allowable over the Sakoda-Raleigh combination.

B. Claims 19-22 and 23-25

Of these claims, claims 19 and 23 are independent. The Examiner indicated that previously presented claims 21 and 25 would be allowable "if rewritten in independent form including all of the limitations of the base claim and any intervening claims" because "prior art references...fail to teach...'determining a probability of having k bit errors in an erroneously decoded tuple based on the self-similarity property of the constellation, wherein said probability of having k bit errors in an erroneously decoded tuple of the non-square constellation is estimated as if said non-square constellation was a square constellation' as in claims 21 and 25." (Office Action pages 9-10) Previously Presented claim 21 depended from previously presented claim 19 and previously presented claim 25 depended from previously presented claim 23. Applicant has: (1) cancelled previously presented claims 21 and 25; (2) amended independent claim 19 to incorporate the limitations of previously presented dependent claim 21; and (3) amended independent claim 23 to incorporate the limitations of previously presented dependent claim 25. Therefore, Applicant submits

that currently amended claims 19 and 23 are patentable over the combination of Sakoda and Raleigh for at least the reason that the Sakoda-Raleigh combination fails to teach each and every element recited in the amended claims as acknowledged by the Examiner. Claims 20-22 depend from claim 19 and claim 24 depends from claim 23. Accordingly, Applicant further submits that claims 20-22 and 24 are allowable over the Sakoda-Raleigh combination for at least the reason that they depend from a base claim that is allowable over the Sakoda-Raleigh combination.

C. Claims 26-42

Of these claims, claim 26 is independent. The Examiner indicated that previously presented claim 28 would be allowable "if rewritten in independent form including all of the limitations of the base claim and any intervening claims" because "prior art references...fail to teach...'determining an average number of bit errors in an erroneous tuple based on said probability and selecting is also based on the average number of bit errors in the erroneous tuple' as in claim 28." (Office Action pages 9-10) Previously Presented claim 28 depended from previously presented claim 26. Applicant has: (1) cancelled previously presented claim 28; and (2) amended independent claim 26 to incorporate the limitations of previously presented dependent claim 28. Therefore, Applicant submits that currently amended claim 26 is patentable over the combination of Sakoda and Raleigh for at least the reason that the Sakoda-Raleigh combination fails to teach each and every element recited in the amended claim as acknowledged by the Examiner. Claims 27-42 depend from claim 26. Accordingly, Applicant further submits that claims 27-42 are allowable over the Sakoda-Raleigh combination for at least the reason that they depend from a base claim that is allowable over the Sakoda-Raleigh combination.

III. CONCLUSION

Applicants submit that the present application is in condition for allowance, and notice to that effect is hereby requested. Should the Examiner feel that further dialog would advance the subject application to issuance, the Examiner is invited to telephone the undersigned at (312) 913-3305.

Respectfully submitted,
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